

# Breaking down the web barriers bit by bit

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(PhysOrg.com) -- Computers and the internet can enable you to communicate globally and provide access to vast stores of information -- provided you have the ability to access it. A system to remove barriers to the internet faced by people with disabilities is gaining ground.

Technology can open doors, but only if you have the capacity to use it. Written information, using a mouse and the way information is presented can act as barriers to those with limited motor skills or those who find it difficult to maintain attention on a topic for long periods.

The NavigAble project is designed for a wide spectrum of children and adults. It is not just one solution. It is based on profiling at the entry point so that the user is offered the most customised solution possible.

“We normally think of people with disabilities as if they were one

homogenous group,” says Leopoldo Ferrč of Exeo Consulting, project manager of NavigAble. “We imagine they will face similar situations and have similar needs. That is not true. They are all individuals with different characters, needs and motivations. NavigAble developers need to investigate case by case.”

To serve such a diverse audience, NavigAble profiles each user by asking them a series of questions about the way they like to receive and view information, and how they like to communicate.

The profiling can define the size of the font, the level of screen contrast and the way the interface looks. Users with motor difficulties can choose to have documents scroll slowly by so they can read without having to constantly change the page. Or a computer voice can read the text out. For those with limited reading ability, NavigAble supports picture languages like DCS or Bliss - or text can be limited to simple vocabularies.

## **Over a million options**

“Profiling is the core - we look to start from the most customised solution possible,” says Ferrč. “Through profiling, NavigAble adapts to the needs of each user. Normally it is the other way around - users have to adapt to the needs of the system. We have not solved all the problems facing people with disabilities who want to use computers, but we can offer more than one million options at this stage.

“The most successful parts of NavigAble are the sentence writer and the simplified mailing system. What many users really value is to be able to communicate with others - to publish a sentence or picture with their comments and to enter discussions. They are most interested in being part of a social network.”

The number of people using NavigAble regularly has grown quickly. The software developed in the EU-funded project is also offered more than 30 centres for people with disabilities in Italy.

Most NavigAble users are not fully autonomous in navigating the internet. They need some help. There are now several hundred trained NaviTutors and teachers who can support system users. An online training course for these user supporters has been developed and the NavigAble team maintains a central helpdesk to answer users' questions.

Supporters are not only crucial in helping NavigAble users overcome physical limitations, they can also play an important motivational role, Ferrč points out.

“At times, NavigAble cannot offer users some of the more attractive parts of the internet. The program must present information in a simple way. For example, Flash or video might simply cause confusion for someone with a severe mental impairment. For some users, communicating can be very hard work. The supporter can help them gain the benefits of that hard work and encourage them to continue.

“We experimented with NavigAble in Italy for three years before looking internationally. The opportunity to have a multi-language system was a logical step forward. Why not include the needs of people from all around Europe?” the project manager asks.

It offers NavigAble opportunities to learn from different cultures and processes used in working with people with disabilities in other countries, he notes.

“We also wanted to increase awareness of the opportunities that NavigAble offers. We are sure that there are many supporters and teachers who would take up the training we offer if they knew about it.

The training is not that long. We offer e-learning training and we maintain networks where they can exchange knowledge and experience.

## Changing with technology

NavigAble is something that can never finish because people with disabilities in the future will also have new and different needs. It will require continuous effort.

“Each time we add a new feature we include a new group of people - but often each specialist feature increases the total population by a very limited number,” says

Part of that development challenge is to exploit the rapidly expanding range of web technologies.

“We are researching how to turn NavigAble into a Web 2.0 platform, making it easier for the users’ families, supporters and teachers to have more opportunities to communicate with each other,” confirms Ferré.

“We want to create communities of people who work with users where they can exchange their success stories.”

**More information:** NavigAble eTEN project - [www.navigabile.eu/](http://www.navigabile.eu/)

Provided by ICT Results

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